ning to be obvious and Sir Frank Baines has recently stated that H. M. Office of Works would save £120,000 annually if the air in the towns were as clean as it is in the country. Owing to the acids contained in certain forms of smoke, destruction of the stone of which many buildings in London are made is going on at an alarming rate. The Houses of Parliament are stated to show this "crumbling" and those who are interested in the campaign for smoke abatement hope that this may result in some official support for their efforts. It has been estimated that a certain big town in the north of England would save £250,000 annually in laundry bills if smoke were eliminated. It has been said, however, that it will require the death of at least three cabinet ministers before any action is taken by parliament.

The Health of London in 1925. The medical officer of health for the County of London has recently presented his report for the year 1925. He pays attention to the wonderful improvement in the environment of the Londoner in the last fifty years. Towards the end of last century, in the days of the "ragged" schools, "bare feet were the rule and frost-bite, ophthalmia, running ears, enlarged glands resulting from skin infestation, malnutrition and deformities were only too common." To-day the scholars trooping out of school present an entirely different picture and "the main cause of improved sickness and mortality statistics among the child population in the London of to-day is to be found in the heightened sense of responsibility aroused in a generation of parents who have themselves passed through the schools." Some of the principal statistical results for the year 1925 are as follows. The birth-rate was 17.9, the death-rate 11.9 and the infantile mortality rate 68. The death-rate from phthisis was 0.95, from pneumonia 1.04, from bronchitis 0.9 and from cancer 1.44. These figures compare very favourably with those of twenty to thirty years ago when the mean death-rate was round about 20.5 and the infantile mortality rate averaged about 150.

Curious Epidemic in Poplar. A curious outbreak of what appeared at first sight to have been some form of food-poisoning recently occurred in Poplar, an east-end suburb of London. Altogether 108 persons were affected in sixty different houses and three children died. In two of these cases death was said to have been due to an enteritis, and in the third sun-stroke had apparently caused death before enteritis had had time to develop. In these three fatal cases ice cream had been eaten a short time before, and this was at first thought to be the source of the trouble, particularly as of the 108 cases over 50 per cent had also eaten this food. Samples of ice cream, eggs and ice cream powder were subjected to analysis and careful bacteriological examinations by the Ministry of Health's officials, but these samples proved harmless. The local manufacture of ice cream was closely inspected by Ministry authorities, but there was nothing found to which exception could be taken. The water supply was also the subject of an analysis, but neither the water from the houses where the victims had lived or examination of the drains in the neighbourhood revealed anything amiss. None of the usual food-poisoning organisms have been found after a careful bacteriological search, and it is therefore stated that this is not an outbreak of food-poisoning. The cause of the epidemic enteritis remains obscure up to the time of writing.

ALAN MONCRIEFF

THE TWELFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS

(From our own correspondent)

The twelfth International Congress of Physiologists was held at Stockholm on August 3rd. The gathering was truly international as there were present six hundred members from every country in Europe, from Canada and the United States, from Japan and China.

No less than two hundred and seventy-two communications were submitted and forty demonstrations made.

One of the most interesting addresses was that of Professor Sir F. Gowland Hopkins, F.R.S., on the biochemical mechanism of tissue oxidation. Although the fact itself is so very familiar that oxygen in the living tissues unites with hydrogen and carbon, sulphur and phosphorus to produce water, carbon dioxide, sulphuric and phosphoric acids, yet hardly anything definite, until quite lately, was known about the actual details of these processes.

The problem may be stated thus: whereas in non-vital oxidations *in vitro,* oxygen will unite with carbon and hydrogen only at a high temperature and with the assistance of a flame or spark, the oxygen in the body unites with those atoms at blood-temperature and without the "powerful" chemicals of the laboratory.

One view — Warburg's — is that the tissue-oxygen is "activated" probably by traces of iron, but this is not the only view theoretically possible; the oxidizable materials themselves, the hydrogen, carbon, etc., might be "activated" to receive the oxygen. The body from which the oxygen departs is "reduced", the body to which the oxygen goes is "oxidized". These two processes are simultaneous and complementary.

The newest view of tissue oxidation is to conceive of an activated hydrogen atom being re-

moved from the tissue and carried to the oxygen which is, therefore, called a "hydrogen acceptor"; for in chemical language the loss of hydrogen is as much "oxidation" as is the addition of oxygen.

Sir Gowland Hopkins discussed the aspect of the problem on which he himself has thrown so much light—the mechanism of the transport of this hydrogen from the tissue to the oxygen. He is inclined to think that this hydrogen transporter is in animals an organic sulphide, a dipeptide of glutamic acid and cystein which he had previously named "glutathione."

A paper important both from the physiological and the medical point of view was one by Professor Collip of Edmonton on the parathyroid hormone. Collip believes that *tetania parathyreopriva* is due to hypocalcæmia, and that the injection of extract of parathyroid gland increases the circulation of calcium in the blood so arresting the tetany. Collip recommends, as treatment for tetany, injections of parathyroid extract followed by the exhibition of calcium lactate.

Pézard of Paris reported on some striking work on sex-reversal in the fowl. He grafts a comb into the back of a hen from which he removes the ovary. He then implants a certain amount of testicular substance into this bird; if it is a female, the comb atrophies completely; in case the bird is a male the comb grows. Pézard showed that the testicular substance produced either no effect at all or a complete sex-reversal: there is no partial reversal; it is once more a case of the "all or nothing."

An interesting communication on diabetes was given by Mansfield. This investigator prevented about one-third of the pancreas from secreting its juice, with the result that the islands hypertrophy and compel animals to become hypoglycæmic. This forms an ingenious demonstration that the islands produce a hormone, which promotes the utilization and disappearance of sugar.

Other communications dealt with the regeneration of the central nervous system in fish, in the larvæ of amphibia, and in embryonic rats, with the measurement of heat produced by the stimulation of a nerve; with the recording of the electrical response of a nerve stimulated through its own proper end-organ, with the spleen as a reservoir of blood-corpuscles, and with the rôle of the cerebellum.

Professor Howell of Baltimore described the results of experiments of his own which tended to show that hæmophilia was due to the platelets not breaking up on coming into contact with foreign bodies. He showed that there is no diminution of prothrombin in hæmophilic as compared with normal blood.

The Congress was very hospitably entertained by the city of Stockholm, by the Universities of Sweden and by the Caroline Institute.

An invitation to meet in the United States of America was accepted for 1929.

D. Fraser Harris

Infant Feeding.—Clifford G. Grulee, Chicago, reviews briefly the activities of the Infant Welfare Society of Chicago which, in connection with the stations of the Chicago Board of Health, covers the poorer districts of the city quite completely. The work of the two is about equally divided, and since the Infant Welfare Society was in the field first, the poorest districts are covered by its stations. There are twenty-five stations, and they take care of populations of all nationalities and colours. Of 2,293 children under one year of age under the care of the society, 26.55 per cent were exclusively breast fed, and 71.5 per cent were exclusively or partially breast fed. Of 1,531 children under six months of age, over half were exclusively, and seven-eighths were exclusively or partially breast fed. Only twelve babies had to be weaned for causes other than failure of milk supply before the nine months period. Cereals and vegetables were extensively used, both as adjuvants to breast milk, and as part of the food given to those wholly artificially fed. Except for the substitution of some other sugar for sucrose, special formulas were used in only twenty-three cases, and acid milks were employed in only twelve of these. In spite of a severe respiratory epidemic, only nine babies were in hospitals at the time of this survey. The experiences of the Society show that seven out of eight babies under six months of age can be fed in whole or in part on the breast. Cereals and vegetables can be used to advantage in feeding infants in the second six months of life. Acid milks are necessary in only one in 300 cases of infant feeding. It may be necessary to substitute for cane sugar some other form of sugar in less than 10 per cent of artificially fed babies. There is probably no advantage whether in the use of proprietary infant foods, and practically no indication for their use.—*Jour. Am. Med. Ass.*, July 17, 1926.